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- (71) Applicant (for all designated States except US): STEM CELL THERAPEUTICS INC. [CA/CA]; 415 Yonge Street, Suite 1103, Toronto, Ontario M5B 2E7 (CA).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): WEISS, Samuel [CA/CA]; 4540 Chapel Road, N.W., Calgary, Alberta T2L 1A6 (CA).
- (74) Agents: TORYS LLP et al.; Maritime Life Tower, Suite 3000, 79 Wellington St. W., Box 270, TD Centre, Toronto, Ontario M5K 1N2 (CA).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: OLIGODENDROCYTE PRODUCTION FROM MULTIPOTENT NEURAL STEM CELLS

(57) Abstract: This invention relates to methods of producing oligodendrocytes from multipotent neural stem cells by using at least one oligodendrocyte promoting factor, particularly granulocyte-macrophage colony stimulating factor, granulocyte colony stimulating factor, interleukin 3 or interleukin 5. The neural stem cells may optionally be expanded prior to being subjected to the oligodendrocyte promoting factor.





A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C12N5/08 A61K38/19

A61K38/20

A51K35/30

A61P25/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C12N IPC 7

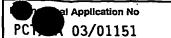
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Х	WO 94 10292 A (NEUROSPHERES) 11 May 1994 (1994-05-11) page 23 -page 25	1,19,21
X	MEHLER M F ET AL: "Cytokines regulate the cellular phenotype of developing neural lineage species." INTERNATIONAL JOURNAL OF DEVELOPMENTAL NEUROSCIENCE: THE OFFICIAL JOURNAL OF THE INTERNATIONAL SOCIETY FOR DEVELOPMENTAL NEUROSCIENCE. 1995 JUN-JUL, vol. 13, no. 3-4, June 1995 (1995-06), pages 213-240, XP002267006 ISSN: 0736-5748 the whole document	1-3

X Further documents are listed in the continuation of box C.	χ Patent family members are listed in annex.
Special categories of cited documents :	STE lotar decument with the ad office the lateral and the
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filling date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	 "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
15 January 2004	19/02/2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer
NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Moreau, J

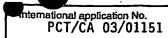


		PC1 03/01151
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Category °	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to claim No.
Χ	MCQUALTER J L ET AL: "Granulocyte macrophage colony-stimulating factor: a new putative therapeutic target in multiple sclerosis." THE JOURNAL OF EXPERIMENTAL MEDICINE. 1 OCT 2001, vol. 194, no. 7, 1 October 2001 (2001-10-01), pages 873-881, XP002267007 ISSN: 0022-1007 the whole document	31
Α	WO 96 15226 A (NEUROSPHERES HOLDING) 23 May 1996 (1996-05-23) the whole document	1-40
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Х		Citation of document, with indication, where appropriate, of the relevant passages		
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. X Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 21-40 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee. .
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

Information on

on patent family members

PCT Application No 03/01151

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